The objective of this study was to identified improvement mechanism of antioxidant; melatonin, with photoendocrine signed by decreasing level of malondialdehyde (MDA). Hopefully this finding will be basic of natural antioxidant making process. This research using Pre-Post Test Design. Sample are 40 male rabbits, 5 months old divided into 5 groups. Rabbit in group A without lighting, group B with 3 hours lighting, from 18.00-21.00WIB, group C with 6 hours lighting from 18.00- 24.00 WIB, group D with 12 hours lighting from 18.00-06.00WIB, group E with 24 hours lighting from 18.00-18.00 WIB in the next day. This treatment was done in 30 days. Blood sample taken from vena auriculars before and after treatment and examined for MDA level with spectrofotometer in 529 nm wavelength. Data was analyzed by Anova 5 % and LSD test 5 %. The result showed that rabbit in group A and B have lower MDA level than in another group. In conclusion, antioxidant level will improve by minimum lighting at night.

Keyword :

melatonin, antioxidant, lighting, malondialdehyde (MDA)